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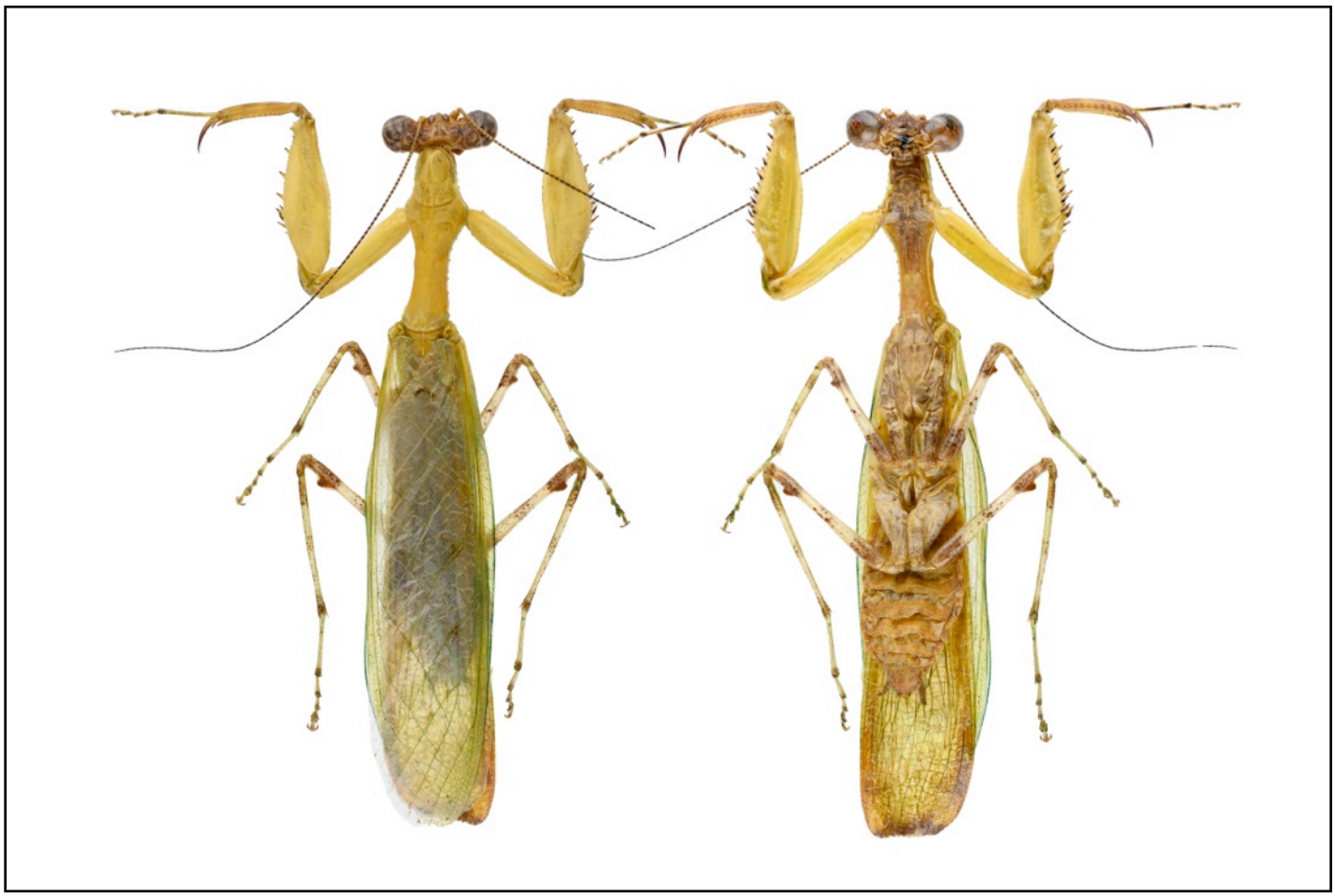

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The genus *Acromantis* Saussure, 1870 (Mantodea: Hymenopodidae) from Laos with description of a new species based on integrated taxonomy

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new records;
Laos.

Abstract. – The genus *Acromantis* is recorded from Laos for the first time with description of a new species *Acromantis dongquan* **sp**. **nov**. based on morphological and molecular evidence herein. Cytochrome c oxidase subunit I (COI) fragment sequences of six *Acromantis* species are provided for the first time with an updated key and distribution map to the known species from Indochinese Peninsula.

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Introduction

The species diverse tribe Acromantini (Hymenopodidae, Acromantinae) currently comprises 9 genera and is restricted to the Oriental Region (Ehrmann, 2002; Svenson et al., 2015; Shcherbakov & Anisyutkin, 2018; Schwarz & Roy, 2019). The plant-mimicking genus *Acromantis* Saussure, 1870 has 30 members at present, distributed from Indian subcontinent to Australasian region, making it the largest genus within Acromantini (Ehrmann, 2002; Wu & Liu, 2024; Kamila & Sureshan, 2024).

Acromantis is a morphologically stable group, it can be distinguished from its allied genera by following characteristics: Eyes rounded; pronotum dorsally smooth; forefemur with dorsal lobe occupying more than half its length; lateral margins of pronotum with small or medium tubercles and distal part of forecoxa without black macula. There are five species of *Acromantis* known from the Indochinese peninsula: *A. grandis* Beier, 1930 from Northern Vietnam, *A. hainana* Wu & Liu, 2024 from Central Vietnam, *A. indica* Giglio-Tos, 1915 from Southern Myanmar, *A. diana* Wu & Liu, 2024 from Northern Myanmar as well as South-Western China and *A.* cf. *montana* from South-Eastern Vietnam (Shcherbakov & Anisyutkin, 2018). Among the five species, four of them were recently described or redescribed in Wu & Liu (2024). However, *A. montana* Giglio-Tos, 1915 with its type locality from Java Island, was recorded from India by Mukherjee & Hazra (1985) with a similar species from Vietnam recorded by Shcherbakov & Anisyutkin (2018). The wide geographic separation and the location of the type raises questions about the presence of this species in the Indian subcontinent and the Indochinese Peninsula.

The Indochinese Peninsula is renowned for its exceptionally high biodiversity but the mantid fauna of Laos has been paid little attention. In this study, the genus *Acromantis* is recorded from Laos for the first time, and a new species, *Acromantis dongquan* **sp**. **nov**., is described and supported by both morphological and molecular evidence. Relationships between eight *Acromantis* species are discussed based on a phylogenetic tree and genetic distances, providing molecular data that contribute to future revisions of the genus.

Material and methods

Specimen treatments and measurements

All examined specimens, including type materials, are deposited in the Department of Entomology, South China Agricultural University (SCAU), Guangzhou, China.

The classification system follows Schwarz & Roy (2019). The terminology follows Brannoch *et al.* (2017) as well as Schwarz & Roy (2019). External morphology was assessed using a micrometer attached to a SteREO Discovery V20 dissecting stereoscope and is defined as follows:

TL total length, from apical margin of clypeus to apex of forewings;
BL body length, from apical margin of clypeus to apex of abdomen;
LL length of lower frons, from the middle of upper margin to the middle of base;
LW width of lower frons at widest part;
PL pronotal length, from the middle of costal margin to the base of pronotum;
PZL prozona length;
MZL metazona length;
PW pronotal width at widest part, including lateral pronotal expansion;
FL length of forewings, from the base to the apical angle;
FW width of forewings at widest part;

Genitalia were dissected in 10% NaOH solution, cleaned with pure water and transferred to glycerin for preservation. Photographs of habitus and male genitalia were taken using a camera Nikon Z7 II attached with either a Nikkor Z MC 105mm f/2.8 VR S Lens or a Laowa 25 mm f/2.8 2.5-5x Ultra Macro Lens. All photographs were processed by Helicon remote (ver. 3.9.7W) and Helicon focus 7.0.2 software. Photos were cleaned up and laid out in plates with Adobe Photoshop 26.1.0.

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Key to males of *Acromantis* species of Indochinese Peninsula

1. Branches of R of forewings with black spots (Wu & Liu, 2024: fig. 8E) [China (Yunnan); Myanmar (Kachin)] . . . . . ***A. diana*** Wu & Liu, 2024

— Branches of R of forewings without black spots **2**

2. Body size large, body length greater than 29 mm. Lateral pronotal expansion large and angulate in dorsal view (Wu & Liu, 2024: fig. 1F, 4F) [China (Guangxi, Yunnan); Vietnam (Bac Kan); Nepal?] . . . . . ***A. grandis*** Beier, 1930

— Body size comparatively small, body length smaller than 26 mm. Lateral pronotal expansion small with rounded margins in dorsal view **3**

3. Vertex tubercle very small, smaller than apical tubercle of lower frons **5**

— Vertex tubercle comparatively large, similar with or longer than apical tubercle of lower frons **4**

4. Distal part of L4A rounded with sdpl. Afa strongly sclerotized (Fig. 9-13) [Laos (Champasak)] . . . ***A. dongquan*** **sp. nov.**

— Distal part of L4A angulate without sdpl. Afa weakly sclerotized (Wu & Liu, 2024: fig. 11D) [China (Hainan); Vietnam (Quảng Bình)] . . . . . ***A. hainana*** Wu & Liu, 2024

5. Vertex tubercle small and flattened. Distal part of L4A angulate with small sdpl. Afa small and semicircular (Wu & Liu, 2024: fig. 3C, 11C) [Myanmar (Myawadi); Laos (Vientiane); Vietnam (Thừa Thiên-Huế, Quảng Nam, Kon Tum, Đồng Nai)?] . . . . . ***A. indica*** Giglio-Tos, 1915

— Vertex tubercle small, sharply narrowed towards apex. Distal part of L4A rounded without sdpl. Afa comparatively large and bean-shaped (Shcherbakov & Anisyutkin, 2018: fig. 63) [South-East Vietnam] . . . . . ***A.*** cf. ***montana*** Giglio-Tos, 1915

Abbreviations of male genitalia

L4A, sclerite extending over the ventral wall of ventral phallomere;
L4B, sclerite extending over the dorsal wall of left phallomere;
paa, posterior process of left phallomere;
pia, process posterolateral to pva (right phallomere);
pva, process anteromesal to pia (right phallomere);
sdpl, lateral secondary distal process of ventral phallomere.

Molecular analyses

15 mitochondrial cytochrome c oxidase subunit I (COI) fragment sequences were selected and sequenced in this study, in which 12 of them were newly sequenced and 3 were downloaded from GenBank databases. The sequences sequenced in this study were uploaded to Genbank or DDBJ (DNA Data Bank of Japan). *Majangella ophirensis* Werner, 1922 was selected as outgroup. For our samples, total genomic DNA was extracted from the muscle of middle- or hindlegs using Ezup Column Animal Genomic DNA Purification Kit (Sangon Biotech, Shanghai, China). Fragments of the mitochondrial molecular marker COI were amplified with the primers LCO-1490 and HCO-2198 (Folmer *et al.*, 1994). Sanger sequencing results were assembled and edited using the Geneious Prime 2025.0.3 (https://www.geneious.com). The best substitution model of ML analyses was determined as 'TN93+I' with the phylogenetic tree was constructed in MEGA version 12 (Kumar *et al.*, 2024) using an ultrafast bootstrap approximation approach with 1000 bootstrap replicates. The genetic between-group mean distances of the same sequences except outgroup was conducted using MEGA version 12 (Kumar *et al.*, 2024) under the K2P model. Assemble Species by Automatic Partitioning (ASAP) (Puillandre *et al.*, 2021) and Poisson Tree Processes (PTP) (https://species.h-its.org/) model were used to delimitate taxa. All the parameters follow default settings.

Taxonomy

Acromantis indica Giglio-Tos, 1915

(Fig. 16-23, 28, 29)

Acromantis indica Giglio-Tos 1915, 7. Type locality: Birmania, Myavadi, Myanmar. Type depository: ZSIC (holotype, ♀).—Giglio-Tos 1927, 527; Ehrmann 2002, 53; Tạ 2010, 19; Wu & Liu 2024, fig. 1C, 2F, 3C, 3O, 4C, 5B, 6C, 7C, 7N, 8C, 10C, 11C, 19.
Acromantis indica nec Giglio-Tos, 1915. In: Wang 1993, 34, fig. 37.

Material examined. – **1** ♀, Laos, Vientiane, Xaykhame Garden, 28.VI.2025, light trap, Xinshuo Sun leg.

Diagnostic features. – The male of *A. indica* is similar to *A. diana* and *A.* cf. *montana* (Shcherbakov & Anisyutkin 2018), but can be distinguished from them as follows: vertex tubercle small and flattened; vertical sternal lobes of sternite five and sternite six with incised apex; distal part of L4A angulate with small sdpl. In *A. diana*, vertex tubercle significant and acute; vertical sternal lobes of sternite five and sternite six large and triangular, without incised apex; distal part of L4A rounded with small sdpl. In *A.* cf. *montana*, vertex tubercle small but acute; distal part of L4A rounded without sdpl.
The female of *A. indica* is unique compared with its Indochinese congeners in having black patches on large longitudinal veins of its forewings, which are widest at base and gradually narrow towards apex (Fig. 16).

Redescription of female

Measurements. – TL: 32.7 mm, BL: 28.3 mm, PL: 8.2 mm, PW: 2.9 mm, FL: 21.7 mm, LW/LL: 2.4, PL/PW: 2.8, MZL/PZL: 2.1, FL/TL: 0.7.

Head. – Triangular, approximately 1.9 times as wide as long. Eyes large and nearly oval, with outer margins rounded. Ocelli rounded with lateral ocellus slightly larger than central ocellus (Fig. 18). Juxtaocular bulges flattened and slightly projected in dorsal view (Fig. 17). Vertex with very small and flattened tubercle, significantly smaller than diameter of central ocellus. Lower frons transverse and sub-pentagonal, upper margin of lower frons with acute apical tubercle (Fig. 18). Antenna filiform, slightly longer than pronotum (Fig. 16).

Pronotum. – Slender, slightly longer than forecoxae, dorsally smooth, dorsal margin with inconspicuous medial kneel. Lateral pronotal expansion small, with rounded edges. Lateral margins of prozona and metazona with small tubercles. Tubercles of metazona slightly larger and sparser than those of prozona, apex rounded. Anterior pronotal margin rounded and posterior pronotal margin truncate (Fig. 17).

Legs. – Dorsal margin of forecoxae with large and small tubercles arranged alternately, tubercles smaller than those on pronotum. Dorsal margins of forefemora serrate, slightly dilated, forming single lobe. Dilated part of femora smaller than half the width of ventral part, with

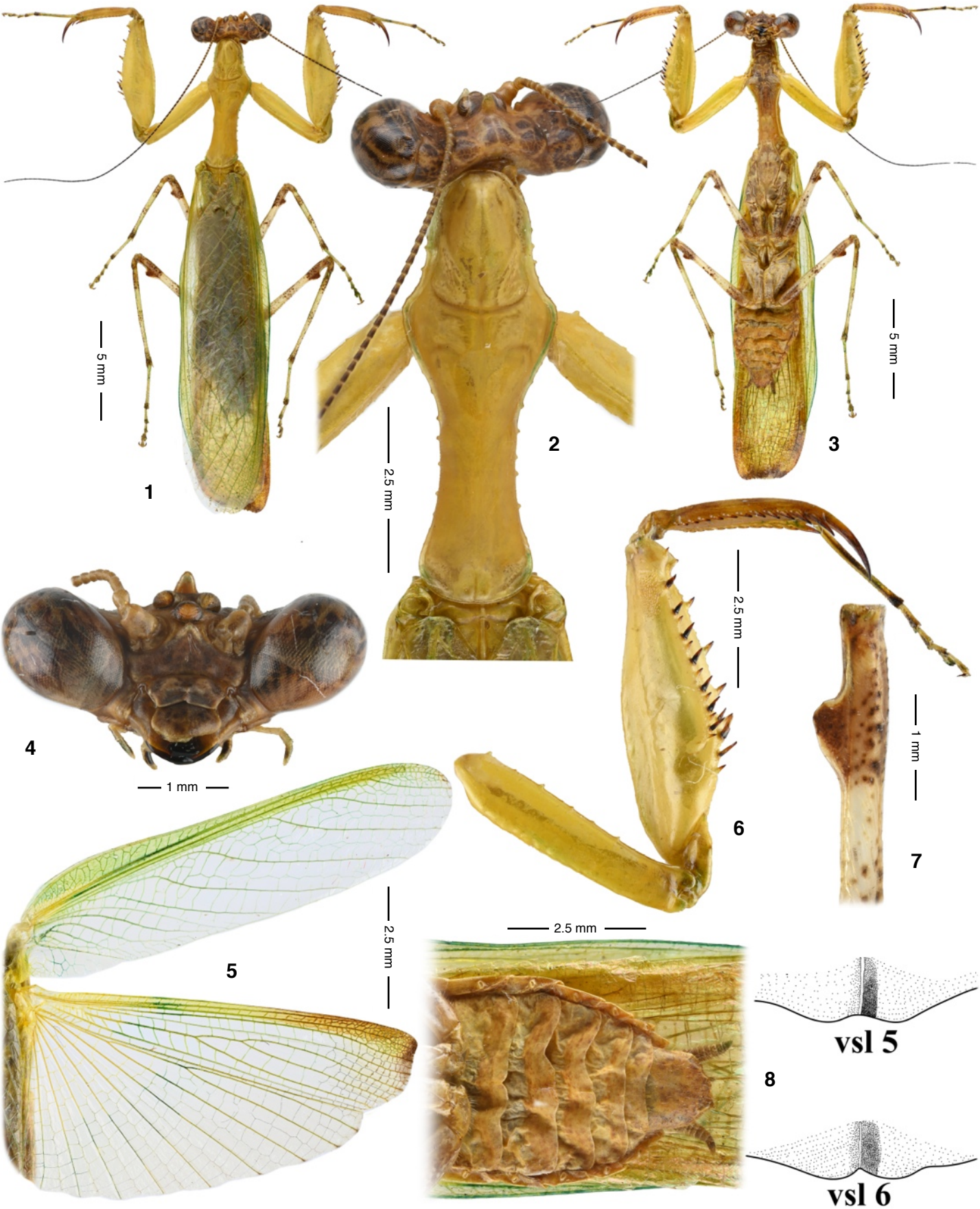

Fig. **1-8**. *Acromantis dongquan* **sp**. **nov**.
1-4, **6-8**. Holotype. **5**. Paratype.

1. Habitus, dorsal view. **2**. Head and pronotum, dorsal view. **3**. Habitus, ventral view. **4.** Head, frontal view. **5**. Forewing and hindwing, dorsal view. **6**. Foreleg, ventral view. **7**. Preapical lobe of hindfemur, ventral view. **8**. Vertical sternal lobes of sternite five and sternite six.

inconspicuous apex (Fig. 20). Femora armed with 4 posteroventral spines, nearly equal in length; 4 discoidal spines, 11 anteroventral spines, with spination pattern: iIiIiIiIiI I. Tibiae armed with 12 posteroventral and 12 anteroventral spines (Fig. 21). Middle and hind legs shorter than forelegs. Middle- and hindfemora with small preapical lobes, apex rounded. Lobes on hindfemora larger than those on middlefemora (Fig. 19, 22).

Wings. – Forewings long, extending beyond abdomen; apex rounded. Forewings subopaque except for costal area. Cells in median area of forewings very dense; large longitudinal veins with black patches, patches widest at base and then gradually narrowing toward apex (Fig. 16). Apex of hindwings truncate with minute lobe.

Thorax and abdomen. – Hearing organ DK form. Abdomen with six visible segments. Sternite five and sternite six with small vertical lobes, incised in middle (Fig. 19, 23).

Coloration. – Body generally greenish in living specimen, greenish-brown in dead specimen. Head brown (Fig. 18). Pronotum greenish-brown (Fig. 17). Forewings yellowish-brown except for costal areas greenish (Fig. 16). Hindwings translucent except for basal part and costal margins yellowish, apex angles blackish. Inner margins of forecoxae reddish (Fig. 21), forefemora and tibia brownish with white bands and black spots (Fig. 19). Anteroventral spines yellowish-brown with black tips except for large anteroventral femoral spines completely black. Discoidal and posteroventral spines yellowish-brown with black tips (Fig. 21).

Notes. – *A. indica* is a little-known species since Giglio-Tos (1915) originally described it from Myanmar. Giglio-Tos (1927) gave further descriptions. Wang (1993) recorded this species from Xizang, China with brief descriptions. Tạ (2010) recorded this species from Central and Southern Vietnam without descriptions or illustrations. Wu & Liu (2024) firstly illustrated the both sexes of *A. indica* from Myanmar, regarded Wang's record from Xizang as erroneous. According to their descriptions and illustrations, vertex tubercle in *A. indica* is small and flattened in male but absent in female. The only female specimen in this study from Laos is consistent with descriptions made by Wu & Liu (2024) except having vertex tubercle similar to male (Fig. 18). The length of the vertical process shows variation among females of the genus *Acromantis* (unpublished observations). In some females of *A. magna* and *A. hainana*, the vertical process was observed to be nearly indistinct; in a female of *A. diana*, the vertex with significant process. These phenomena contrary their original descriptions (Yang, 1996; Wu & Liu, 2024). Therefore, the very small vertex tubercle in female is considered an intraspecific variation within this species in this research.

Distribution. – Myanmar (Kachin); Vietnam; Laos (Vientiane) **new country record** (Fig. 29).

Acromantis diana Wu & Liu, 2024

(Fig. 28, 29)

Acromantis diana Wu & Liu 2024, 13, fig. 1E, 2H, 3E, 3Q, 4E, 5D, 6E, 7E, 7P, 8E, 10E, 11E, 13C, 17A, 19.
Type locality: China, Yunnan, Jinhong, Xiaopuxi.
Type depository: IZCAS (holotype, ♂).

Material examined. – **1** ♀, China, Yunnan, Puer, Meizihu Park, 1400 m, 21.IX.2024, sweeping net, Zihao Zhu leg.

Diagnostic features. – *A. diana* is the only known species distributed in the Indochinese Peninsula that both sexes bear black spots on the branches of R of the forewings. For detailed descriptions and illustrations see Wu & Liu (2024).

Distribution. – China (Yunnan); Myanmar (Kachin) (Fig. 29).

Acromantis dongquan **sp. nov.**

(Fig. 1-15, 24-29)

ZooBank : https://zoobank.org/C9CBDE78-C8A5-40CA-A7FA-917443D02634

Holotype, ♂, Laos, Dong Hua Sao National Bio-Diversity Conservation Area, Paksong, Champasak, 15.1711°N, 106.0746°E, 850 m, 27.V.2025, light trap, Zhu Z.H., Ye M.L. & Sun X.S. leg.

Paratypes

2 ♂, same data as that of holotype;
1 ♂, Laos, Satin, Champasak, 15.2925°N, 106.9463°E, 200 m, 29.V.2025, light trap, same collectors as that of holotype.

Diagnostic features. – This new species is similar to *A. indica*, and *A.* cf. *montana* in Shcherbakov & Anisyutkin (2018), but can be distinguished from them as follows: vertex tubercle significant and triangular, longer than apical tubercle of lower frons (Fig. 4); body small sized, BL 19.0-19.3 mm; distal part of L4A rounded with small sdpl, afa digitiform and sclerotized apically (Fig. 9-13). In *A. indica*, vertex with tubercle small and flattened (Wu & Liu, 2024: fig. 3C); BL 21.4 mm, longer than *A. dongquan*; distal part of L4A angulate, afa rounded and shorter than that in *A. dongquan* (Wu & Liu 2024: fig. 11C). In *A.* cf. *montana*, pronotum comparatively robust (Shcherbakov & Anisyutkin 2018: fig. 61); vertex tubercle very small, smaller than apical tubercle of lower frons; body size larger, BL 19.5-25.0 mm; sdpl absent in L4A (Shcherbakov & Anisyutkin 2018: fig. 63).

Description of male

Measurements. – TL: 25.4-25.6 mm, BL: 19.0-19.3 mm, PL: 6.5-6.6 mm, PW: 2.3 mm, FL: 15.0-15.3 mm, FL/FW: 4.2, LW/LL: 2.4, PL/PW: 2.8-2.9, MZL/PZL: 2.1, FL/TL: 0.6.

Head. – Triangular, approximately 2.1 times as wide as long. Eyes large and nearly oval, with outer margins rounded. Ocelli similar with each other. Juxtaocular bulges flattened and hardly seen in dorsal view. Vertex with robust tubercle larger than apical tubercle of lower frons, gradually narrowing toward apex, apex rounded. Lower frons transverse and sub-pentagonal, upper margin of lower frons with acute apical tubercle. Clypeus smooth, below of dorsal margin with transverse groove. Labrum nearly rounded (Fig. 2, 4). Antenna filiform, longer than pronotum (Fig. 1).

Pronotum. – Elongate and slender, longer than forecoxae, dorsally smooth, dorsal margin with inconspicuous medial kneel. Lateral pronotal expansion small, with rounded edges. Lateral margins of prozona and metazona with minute tubercles, tubercles with acute apex, similar in size. Anterior pronotal margin rounded and posterior pronotal margin truncate (Fig. 1, 2).

Legs. – Dorsal margins of forecoxae with small tubercles similar to those on pronotum. Dorsal margins of forefemora serrate, slightly dilated, forming single lobe. Dilated part of femora about 1/3 width of ventral part, with apex inconspicuous. Femora armed with 4 posteroventral spines, nearly equal in length; 4 discoidal spines, 13 anteroventral spines, with spination pattern: iIiIiIiIiIiI I. Tibiae armed with 12 posteroventral and 12 anteroventral spines (Fig, 6). Middle and hind legs shorter than forelegs. Middle- and hindfemora with small preapical lobes. Lobes on hindfemora larger than those on middlefemora (Fig. 1, 3, 7).

Wings. – Forewings long and slender, about 4.2 times as long as wide, extending beyond abdomen; apex rounded. Forewings transparent except for costal area subopaque. Stigma absent. Cells in median area of forewings large and sparse, up to 2 rows of cells lying between two cubitus anterior veins; longitudinal veins without markings. Hindwings shorter than forewings, transparent except for costal area subopaque, apex truncate with minute lobe (Fig. 5).

Thorax and abdomen. – Hearing organ DK form. Abdomen with eight visible segments. Sternite five and sternite six with small vertical lobes, incised at middle (Fig. 3). Supra-anal plate obtusely angular, cerci densely setose (Fig. 14). Subgenital plate pentagonal with short setae, posterior margin with deep emargination, anterior margin slightly concave between styli (Fig. 15).

Male genitalia (Fig. 9-13). – Weakly sclerotized. L4B elongate, strongly curved at base. Afa digitiform, highly sclerotized at distal part, densely covered by short spines. Paa inconspicuous with short setae. L4A membranous, distal part rounded, sdpl variable, forming a small or broad

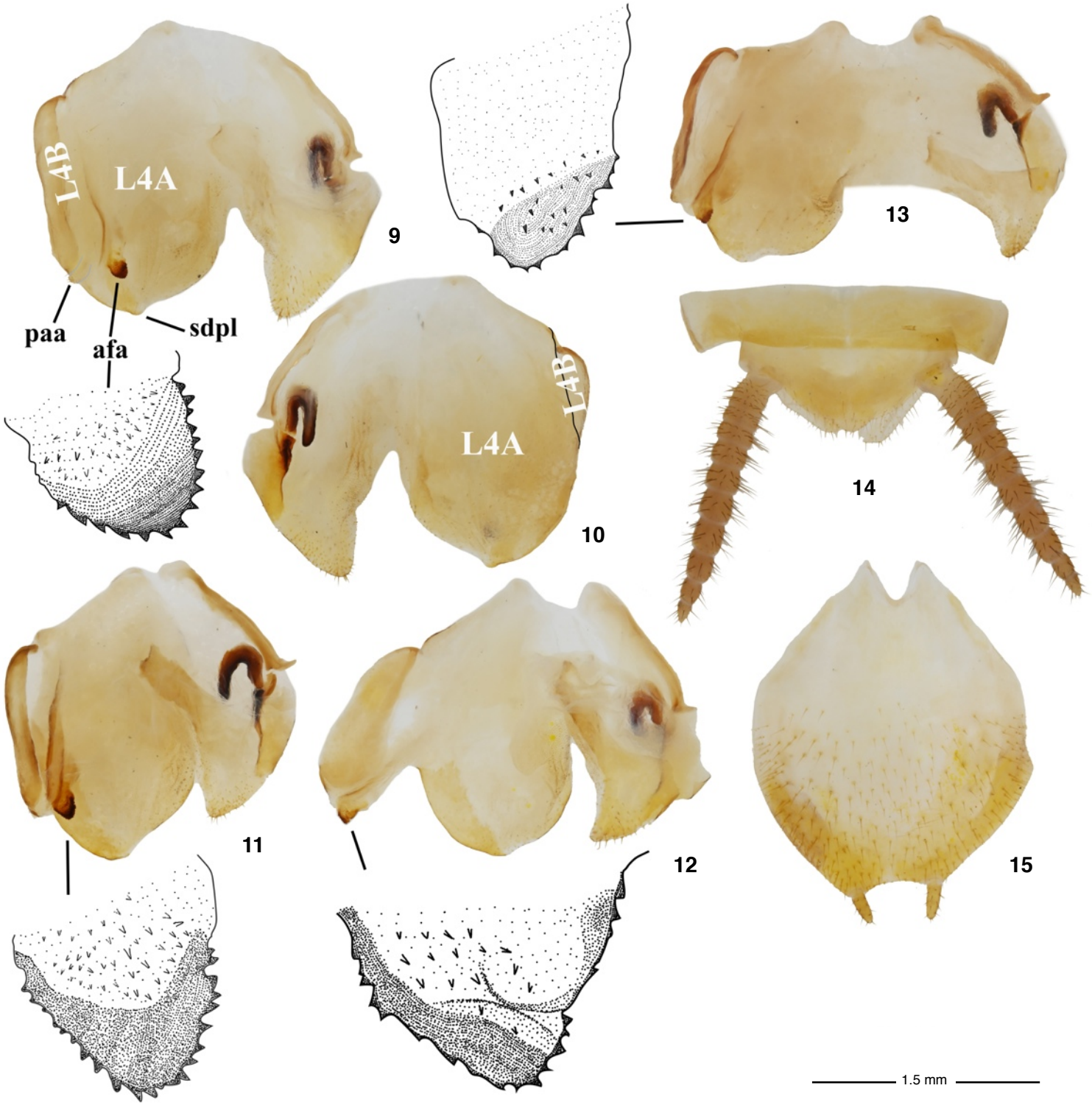

Fig. **9-15**. Male genital complex, supra-anal plate and subgenital plate of *A*. *dongquan* **sp**. **nov**.
9, **10**, **14**, **15**. Holotype. **11-13**. Paratypes.

9-13. Male genital complex. **14**. Supra-anal plate. **15**. Subgenital plate. **9**, **11-14**. Dorsal view. **10**, **15**. Ventral view.

projection. Right phallomere crescent, apex with short setae; pva and pia strongly sclerotized, pva ear-shaped, pia stick-like.

Coloration. – Body dorsally greenish except for head blackish in living specimens (Fig. 26, 27). Forewings transparent except for costal areas greenish. Hindwings translucent except for basal part and costal margins yellowish, apex angles blackish. Forecoxae and forefemora greenish except for trochanters brown. Foretibae reddish-brown. Each segment of tarsi brown except for black apex. Anteroventral spines yellowish-brown with black tips except for large anteroventral femoral spines completely black. Discoidal and posteroventral spines yellowish-brown with black tips (Fig. 6). Prosternum yellowish-brown. Mesothorax, metathorax blackish-brown with black spots. Middle legs and hind legs brownish with white bands and black spots (Fig. 3).

Distribution. – Laos (Champasak) (Fig. 29).

Etymology. – The specific epithet *dongquan* is a noun in apposition, formed from the last given names of Zhendong Huang and Quan Zhang, in recognition of their guidance and contributions to the author's studies in taxonomy.

Notes. – Mukherjee & Hazra (1985) recorded and described male of *A. montana* from India as well as Mukherjee et al. (1995) and Kamila et al. (2024). Accroding to their descriptions, the Indian *A. montana* has spiniform and small vertex tubercle, prosternum black in color, large body size (24-25 mm). Those features are different with *A.* cf. *montana* from Vietnam (Shcherbakov & Anisyutkin, 2018) and *A. dongquan* **sp**. **nov**. The black prosternum and very small vertex tubercle on Indian *A. montana* are consistent with its female specimens from Java (Giglio-Tos, 1915; Giglio-Tos, 1927), but the wide ranges between two localities raises doubts about the validity of the records of the taxon in India, particularly given the high species diversity within this genus.
The shape of sdpl show variation among specimens, but the significant and robust vertex tubercle and distally rounded L4B (Fig. 9-13) are constant features of *A. dongquan* **sp**. **nov**. The species delimitation results (Fig. 28) and genetic distances also support *A. dongquan* **sp**. **nov**. as a distinct species from its congeners.

Results

Genetic distances, phylogeny and species delimitation

A. dongquan shows lowest genetic distances between *A. diana* (0.017), followed by *A. indica* (0.021). *A. indica* exhibits the closest relationship with *A. diana* (0.025). However, the genetic distances between *A. dongquan* and *A. indica*, and between *A. dongquan* and *A. diana*, are inconsistent with the topology of the phylogenetic tree. In the phylogeny, *A. dongquan* is recovered as most closely related to *A. indica*, with *A. diana* as the next closest species (Fig. 28). In contrast, the genetic distance analysis suggests the opposite pattern. Morphologically, *A. dongquan* is most similar to *A. indica*, which further supports the relationship inferred from the phylogenetic tree. I therefore consider the phylogenetic topology to better reflect the true evolutionary relationships.
The independence of eight *Acromantis* species in this study was confirmed by the phylogenetic tree and species delimitation results (Fig. 28). The topology of phylogenetic tree (Fig. 28) reveals that eight *Acromantis* species can be divided into four subclades: (1): *A. hainana* + *A.magna*; (2): *A. japonica*; (3): *A. montana* + *A. nujiangensis*; (4): *A. diana* + *A. indica* + *A. dongquan*. The monophyly of Clade 4 (*A. diana*, *A. indica* and *A. dongquan*) is strongly supported (bootstrap support values = 89) as well as Clade 1 (*A. hainana* + *A. magna*) (bootstrap support values = 96). Two species delimitation methods further support the species status of *A. dongquan*. Both ASAP and PTP recovered *A. dongquan* as a distinct evolutionary lineage. However, the two methods showed slight disagreement regarding sample LC909710 of *A. dongquan*: while ASAP consistently grouped all samples into single species, PTP split LC909710 as a separate unit. Despite this minor incongruence, the overall congruence between phylogenetic structure, species delimitation results, and diagnostic morphological differences supports the recognition of *A. dongquan* as a distinct species. Both species delimitation methods treated the specimen morphologically identified as *A. magna* (PV568334) as an independent species. However, considering the phylogenetic topology and the consistency of morphological characters, I conclude that all three samples should be assigned to *A. magna*.

Discussion

The genus *Acromantis* exhibits high diversity and a wide geographic distribution, many species have been described based on single sex only, making it a taxonomically difficult genus. *Acromantis* remains poorly studied in numerous regions, indicating considerable potential for future taxonomic revisions. Moreover, significant sexual dimorphism in the genus further complicates species identification and the reliable association of males and females.
The present study presents genital variation in *Acromantis dongquan* **sp**. **nov**., revealing intraspecific differences in the shapes of L4A, sdpl, and afa. These findings demonstrate that genital characters may show a certain degree of variability within species and highlight the necessity of adopting an integrative taxonomic framework that combines both molecular and morphological evidence in future studies of the genus.
In addition, the genetic distances inferred from COI data were inconsistent with the phylogenetic topology in this study. Such incongruence may be attributable to the limitations of single mitochondrial marker. To resolve these discrepancies, future studies should incorporate multiple nuclear loci, increase taxon sampling, and employ coalescent-based species delimitation approaches.

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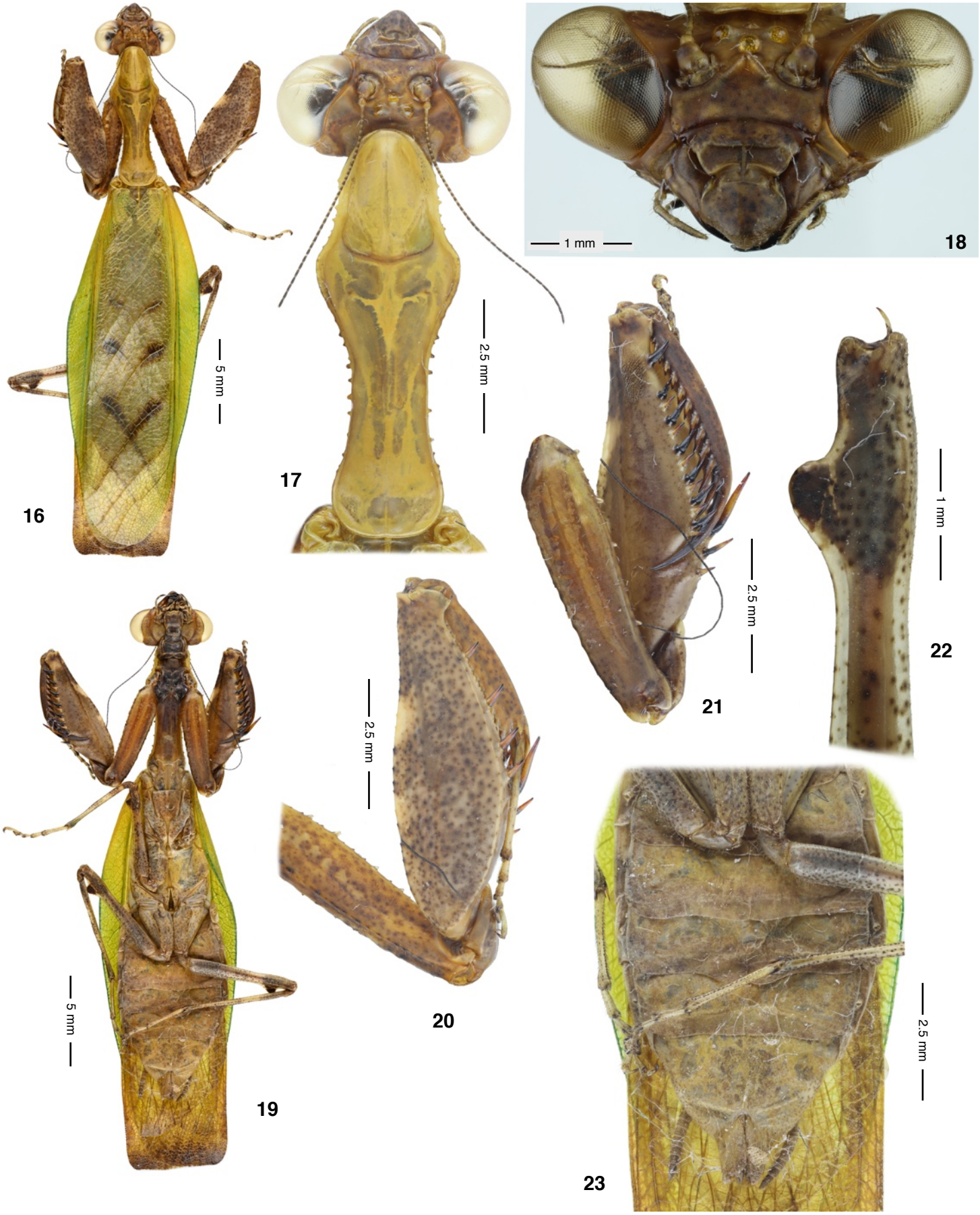

Fig. **16-23**. Female of *Acromantis indica*.

16. Habitus, dorsal view. **17**. Head and pronotum, dorsal view. **18**. Head, frontal view. **19**. Habitus, ventral view. **20**. Foreleg, dorsal view. **21**. Ditto, ventral view. **22**. Preapical lobe of hindfemur, ventral view. **23**. Abdomen, ventral view.

Fig. **24-27.** Habitats and living specimens of *Acromantis dongquan* **sp**. **nov**. **24**. Satin, Laos, light trap devices set up to collect mantises. **25**. Forests in Paksong, Laos. **26**, **27**. Living specimens of *A. dongquan* **sp**. **nov**.

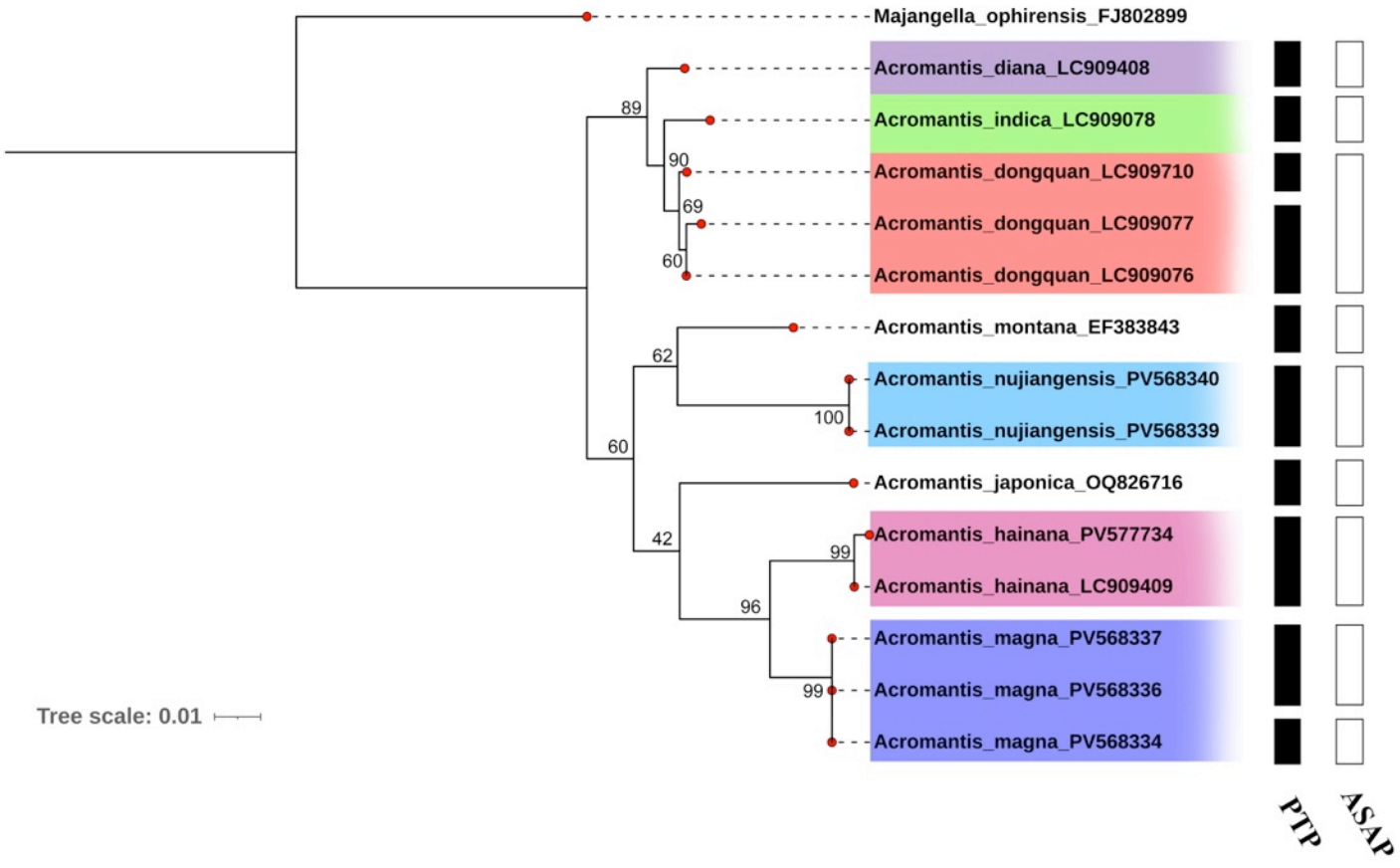

Fig. 28. Maximum Likelihood tree and results of the species delimitation of *Acromantis* based on COI sequences. Numbers next to each node represent maximum likelihood bootstrap support values (%).

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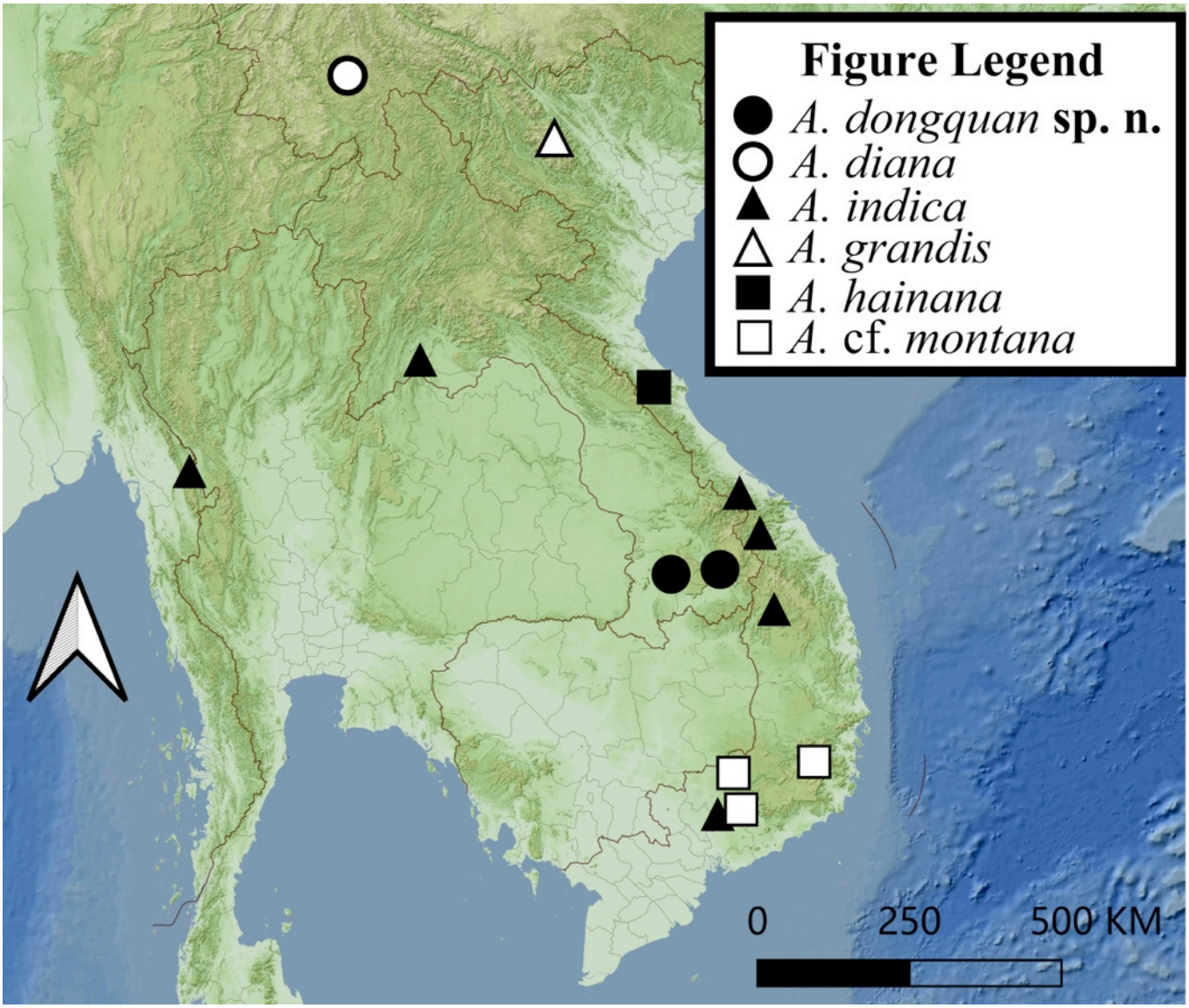

Fig. **29**. Distribution of *Acromantis* in Indochinese Peninsula.

Table 1. COI sequences used for phylogenetic study with Genbank or DDBJ accession numbers.

Taxon	Voucher	Collection location	Genbank	DDBJ	Notes	Source of Data
Majangella ophirensis	N/A	N/A	FJ802899	N/A	N/A	Svenson et al., 2015
Acromantis hainana	SCAU009	Jianfengling Mt., Hainan Island, China	PV577734	N/A	Male	This study
A. hainana	SCAUAHAI2	Bawangling Mt., Hainan Island, China	N/A	LC909409	Male	This study
A. magna	SCAU001	Nanling National Nature Reserve, Guangdong, China	PV568334	N/A	Male	This study
A. magna	SCAUA004	Nanling National Nature Reserve, Guangdong, China	PV568337	N/A	Male	This study
A. magna	SCAUA003	Nanling National Nature Reserve, Guangdong, China	PV568336	N/A	Male	This study
A. japonica	N/A	Korea	OQ826716	N/A	N/A	Shim & Song, 2024
A. montana	N/A	India	EF383843	N/A	N/A	Svenson & Whiting, 2009
A. nujiangensis	SCAU007	Gongshan County, Yunnan, China	PV568340	N/A	Male	This study
A. nujiangensis	SCAU006	Gongshan County, Yunnan, China	PV568339	N/A	Male	This study
A. diana	SCAUADIA1	Puer City, Yunnan, China	N/A	LC909408	Female	This study
A. indica	SCAUAIND1	Vientiane, Laos	N/A	LC909078	Female	This study
A. dongquan	SCAUADON0	Paksong, Laos	N/A	LC909710	Holotype	This study
A. dongquan	SCAUAPHE1	Satin, Laos	N/A	LC909077	Paratype	This study
A. dongquan	SCAUAPHE2	Paksong, Laos	N/A	LC909076	Paratype	This study

Table 2. Genetic between-group mean distances of eight *Acromantis* species.

Taxon	1	2	3	4	5	6	7	8
1. *A. nujiangensis*								
2. *A. magna*	0.076							
3. *A. hainana*	0.080	0.035						
4. *A. diana*	0.074	0.073	0.078					
5. *A. montana*	0.062	0.068	0.060	0.064				
6. *A. dongquan*	0.075	0.065	0.074	0.017	0.060			
7. *A. japonica*	0.082	0.064	0.070	0.069	0.073	0.064		
8. *A. indica*	0.085	0.069	0.073	0.025	0.069	0.021	0.066	

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Résumé

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Le genre *Acromantis* est signalé pour la première fois au Laos, avec la description d'une nouvelle espèce, *Acromantis dongquan* **sp**. **nov**., basée sur des données morphologiques et moléculaires. Les séquences de fragments de la sous-unité I de la cytochrome c oxydase (COI) de six espèces *d'Acromantis* sont fournies pour la première fois, accompagnées d'une clé d'identification et d'une carte de répartition mises à jour pour les espèces connues de la péninsule indochinoise.

Mots-clés. – Mantodea, Hymenopodidae, *Acromantis*, ADN, barcode, COI, ASAP, PTP, taxonomie, description, nouvelle espèce, Laos.

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Faunitaxys

Volume 14, Numéro 16, Mars 2026

SOMMAIRE

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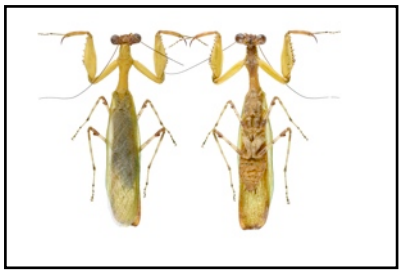

Illustration de la couverture :

Acromantis dongquan **sp**. **nov**., holotype

Crédits:

Zi-Hao Zhu : Fig. 1-26 & couverture.

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